

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~In a communications network, a~~ A system for providing
~~wireless data service, the system comprising:~~

a plurality of mobile stations;

at least one packet data network; and

a wireless access integrated node (WAIN) ~~directly intermediating between~~

coupled to the plurality of mobile stations via a radio interface and

coupled to the at least one packet data network via a network interface to

provide ~~a~~ an intermediating wired and/or wireless dedicated broadband
connection between the plurality of mobile stations and the at least one
packet data network, wherein the dedicated broadband connection is to
implement a simplified protocol structure, wherein the WAIN

~~automatically configures itself to minimize interference between the~~

~~plurality of mobile stations and the at least one packet network, the WAIN~~

~~having: a plurality of mobile data transmission modules and signaling~~

~~modules for sending, processing, and receiving data packets; a plurality of~~

~~interfaces and ports for sending messages to and receiving messages from~~

~~at least one packet data network, systems, and mobile stations~~

~~interconnected with the WAIN; a database containing subscription,~~

~~operating, and charging information for the plurality of mobile stations~~

~~attached to the WAIN; and a main controller to collect charging data and~~

~~coordinate and control the mobile data transmission modules, signaling~~

~~modules, interfaces, and databases;~~

~~a radio interface interconnecting the plurality of mobile stations and the WAIN;
and a network interface interconnecting the WAIN and at least one packet
data network.~~

2. (Previously Presented) The system of claim 1, wherein the packet data network comprises the Internet.
3. (Previously Presented) The system of claim 1, wherein the packet data network comprises an intranet.
4. (Previously Presented) The system of claim 3, wherein a content server is attached to the intranet.
5. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules comprises a Packet Data Convergence Protocol (PDCP) module.
6. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules comprises a Radio Link Control / Medium Access Control (RLC/MAC) module.
7. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules comprises a Transceiver (TRX) module.
8. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of signaling modules comprises Radio Resource Management.
9. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of signaling modules comprises General Packet Radio Service (GPRS) Mobility Management.
10. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of signaling modules comprises Session Management.

11. (Currently Amended) The system of claim ~~4~~75, wherein the plurality of interfaces comprises a voice interface.
12. (Currently Amended) The system of claim ~~4~~75, wherein the plurality of interfaces comprises a local information system interface.
13. (Currently Amended) The system of claim ~~4~~75, wherein the plurality of interfaces comprises an appliance control interface.
14. (Currently Amended) The system of claim ~~4~~75, wherein the plurality of interfaces comprises an intranet gateway.
15. (Currently Amended) The system of claim ~~4~~75, wherein the plurality of ports comprises an RJ11 port for a fixed wire telephone connection.
16. (Currently Amended) The system of claim ~~4~~75, wherein the system interconnected with the WAIN comprises a local information system.
17. (Currently Amended) The system of claim 16, wherein the WAIN ~~is to~~ has means for remotely synchronizing-synchronize a personal digital assistant with its host program on the local information system.
18. (Currently Amended) The system of claim 16, wherein the WAIN ~~has further comprises a~~ voice recognition capability means for to audibly replay relaying service request commands from the mobile station to the local information system.
19. (Currently Amended) The system of claim 16, wherein the WAIN ~~has a further comprises~~ text-to-speech capability to means for audibly relaying-replay information from the local information service to the mobile station.
20. (Cancelled)

21. (Currently Amended) The system of claim 20~~1~~, wherein the WAIN ~~has a further~~ comprises voice recognition capability to means for audibly relaying-replay remote control commands from the plurality of mobile stations ~~(station to the an~~ application command system).
22. (Currently Amended) The system of claim 20~~2~~1, wherein the WAIN ~~has a further~~ comprises text-to-speech capability to means for audibly relaying-replay an appliance status report delivered from the appliance control system to the plurality of mobile stations ~~station~~.
23. (Currently Amended) The system of claim 1, wherein ~~the system interconnected with the~~ WAIN further comprises a wireless data controller.
24. (Previously Presented) The system of claim 1, wherein the radio interface comprises a GPRS radio interface.
25. (Previously Presented) The system of claim 1, wherein the network interface comprises an Internet Protocol (IP) interface.
26. (Currently Amended) The system of claim 1, further comprising including means ~~for enabling a mobile station a~~ user to obtain a temporary subscription to the WAIN through a dynamic registration and cancellation process, wherein a in ~~which user's mobile station's~~ secret subscription identity of a mobile station of ~~the user~~ is linked with ~~the user's mobile station's mobile an~~ equipment identity of the mobile station of the user.
27. (Currently Amended) The system of claim ~~4~~7~~5~~, wherein the plurality of mobile data transmission modules are to modulate ~~includes means for modulating data~~ packets.

28. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules are to compress ~~includes means for compressing data packets.~~
29. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules are to encrypt ~~includes means for encrypting data packets.~~
30. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules are to multiplex ~~includes means for multiplexing data packets.~~
31. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules are to correct ~~includes means for correcting errors in data packets.~~
32. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules are to segment ~~includes means for segmenting data packets.~~
33. (Currently Amended) The system of claim ~~1~~75, wherein the plurality of mobile data transmission modules are to control ~~includes means for controlling the sequence of data packets.~~
34. (Currently Amended) The system of claim 1, wherein the WAIN is further to support ~~includes means for supporting~~ mobile stations roaming between a local WAIN environment and a public mobile network.
35. (Currently Amended) The system of claim 1, wherein the WAIN is further to support ~~includes means for supporting~~ mobile stations roaming between different WAIN systems.

36. (Currently Amended) The system of claim 1, wherein the WAIN is further to provide ~~includes means for providing~~ wireless data services in a community service area located within cells of a public network when the WAIN is clustered with ~~several~~ other WAIN systems.
37. (Previously Presented) The system of claim 1, wherein the WAIN supports mobile stations roaming between different WAIN systems.
38. (Currently Amended) The system of claim 1, wherein the WAIN is further to configure ~~includes means for configuring~~ the WAIN as a network node where no specified system parameters are present.
39. (Currently Amended) ~~In a communications network, a~~ A device for providing access to wireless data services, the device comprising:
- a plurality of mobile data transmission modules and signaling modules for sending, processing, and receiving data packets;
 - a plurality of interfaces and ports for sending messages to and receiving messages from at least one packet data network, systems, and a plurality of mobile stations interconnected with the device;
 - a database containing subscription, operation, and charging information for the plurality of mobile stations attached to the device; and
 - a main controller to collect charging data and coordinate and control the mobile data transmission modules, signaling modules, interfaces, port, and database; wherein the device directly intermediating between the plurality of mobile stations and at least one packet data network to provide a wired and/or wireless dedicated broadband connection, wherein the dedicated broadband connection is to implement a simplified protocol structure,

wherein the device automatically configures itself to minimize interference between the plurality of mobile stations and the at least one packet network.

40. (Currently Amended) The device of claim 39, wherein the packet data network comprises the ~~internet~~Internet.
41. (Previously Presented) The device of claim 39, wherein the packet data network comprises an intranet.
42. (Currently Amended) The device of claim 41, wherein a content server is attached to the ~~internet~~Internet.
43. (Previously Presented) The device of claim 39, wherein the plurality of mobile data transmission modules comprises a Packet Data Convergence Protocol (PDCP) module.
44. (Previously Presented) The device of claim 39, wherein the plurality of mobile data transmission modules comprises a Radio Link Control / Medium Access Control (RLC/MAC) module.
45. (Previously Presented) The device of claim 39, wherein the plurality of mobile data transmission modules comprises a Transceiver (TRX) module.
46. (Previously Presented) The device of claim 39, wherein the plurality of signaling modules comprises a radio resource management module.
47. (Previously Presented) The device of claim 39, wherein the plurality of signaling modules comprises a General Packet Radio Service (GPRS) mobility management module.
48. (Previously Presented) The device of claim 39, wherein the plurality of signaling modules comprises a session management module.

49. (Previously Presented) The device of claim 39, wherein the plurality of interfaces comprises a voice interface.
50. (Previously Presented) The device of claim 39, wherein the plurality of interfaces comprises a local information system interface.
51. (Previously Presented) The device of claim 39, wherein the plurality of interfaces comprises an appliance control interface.
52. (Previously Presented) The device of claim 39, wherein the plurality of interfaces comprises an intranet gateway.
53. (Previously Presented) The device of claim 39, wherein the plurality of ports comprises a Registered Jack number 11 (RJ11)port for a fixed wire telephone connection.
54. (Previously Presented) The device of claim 39, wherein the system interconnected with the device comprises a local information system.
55. (Previously Presented) The device of claim 39, further including a voice recognition subsystem.
56. (Previously Presented) The device of claim 39, further including a text-to-speech synthesis subsystem.
57. (Previously Presented) The device of claim 39, wherein the system interconnected with the device comprises a local appliance control system.
58. (Previously Presented) The device of claim 39, wherein the system interconnected with the device comprises a wireless data collector.
59. (Previously Presented) The device of claim 39, wherein the plurality of interfaces comprises a radio interface including a GPRS radio interface.

60. (Previously Presented) The device of claim 39, wherein the plurality of interfaces comprises a network interface including an IP interface.
61. (Currently Amended) The device of claim 39, wherein the plurality of mobile data transmission modules are to modulate ~~includes means for modulating~~ data packets.
62. (Currently Amended) The device of claim 39, wherein the plurality of mobile data transmission modules are to compress ~~includes means for compressing~~ data packets.
63. (Currently Amended) The device of claim 39, wherein the plurality of mobile data transmission modules are to encrypt ~~includes means for encrypting~~ data packets.
64. (Currently Amended) The device of claim 39, wherein the plurality of mobile data transmission modules are to multiplex ~~includes means for multiplexing~~ data packets.
65. (Currently Amended) The device of claim 39, wherein the plurality of mobile data transmission modules are to correct ~~includes means for correcting~~ errors in data packets.
66. (Currently Amended) The device of claim 39, wherein the plurality of mobile data transmission modules are to segment ~~includes means for segmenting~~ data packets.
67. (Currently Amended) The device of claim 39, wherein the plurality of mobile data transmission modules are to control ~~includes means for controlling~~ the sequence of data packets.
68. (Currently Amended) The device of claim 39, further ~~including means for configuring~~ configures the device as network node where no specified system parameters are present.

Claims 69-74 (Cancelled)

75. (New) The system of claim 1, wherein the WAIN comprises:
- a plurality of mobile data transmission modules and signaling modules for sending, processing, and receiving data packets,
 - a plurality of interfaces and ports for sending messages to and receiving messages from at least one packet data network, systems, and mobile stations interconnected with the WAIN,
 - a database containing subscription, operating, and charging information for the plurality of mobile stations attached to the WAIN, and
 - a main controller to collect charging data and coordinate and control the mobile data transmission modules, signaling modules, interfaces, and databases.